Product Information

INFINAM® PA 6004 P

POLYAMIDE-12 POWDER FOR ADDITIVE MANUFACTURING PROCESSES

INFINAM® PA 6004 P is a natural colored fine powder especially for the use in additive manufacturing. Our product is suitable for manufacturing of functional prototypes, manufacturing of individual units as well as serial parts. INFINAM® PA 6004 P is especially suitable for powder bed fusion technologies.

Features

- Powder for flame retardant 3D print parts
- Exploitable on common systems for powder-based additive manufacturing
- Easy-to-process
- High process stability
- Excellent powder flow properties
- Excellent mechanical properties
- Excellent surface resolution and feature detail
- Nice surface finish
- Good resistance against numerous chemicals

The features and properties presented are to be understood as typical and are intended for reference and comparison purposes only. Due to layer-wise construction and by variation of processing conditions the actual properties of components from additive processes will vary. Due to process-related deviations the user is responsible to ensure the characteristic values required for the respective use and to carry out additional application-related tests if necessary.

The values presented are typical or average values, they do not constitute a specification.

FOR FURTHER INFORMATION PLEASE CONTACT US AT EVONIK-HP@EVONIK.COM
OR VISIT OUR PRODUCT AT WWW.INFINAM.COM

Properties of 3D printed parts acc. ISO	dry / cond	Unit	Test Standard
Tensile modulus flat X	**2500 / -**	MPa	ISO 527
Tensile modulus on-edge Y	**2500 / -**	MPa	ISO 527
Tensile modulus upright Z	**2300 / -**	MPa	ISO 527
Tensile strength flat X	**47 / -**	MPa	ISO 527
Tensile strength on-edge Y	**47 / -**	MPa	ISO 527
Tensile strength upright Z	**42 / -**	MPa	ISO 527

EVONIK Leading Beyond Chemistry

Nominal strain at break flat X, tB	**4 / -**	%	ISO 527
Nominal strain at break on-edge Y, tB	**4 / -**	%	ISO 527
Nominal strain at break upright Z, tB	**4 / -**	%	ISO 527

Thermal properties	**dry / cond**	**Unit**	**Test Standard**
Melting temp., DSC 1st heating, powder	**187 / ***	°C	ISO 11357

Burning Behav.	**dry / cond**	**Unit**	**Test Standard**
UL Blue Card available	yes / *	-	-
Burning behav. at thickness h	**V-0 / ***	class	IEC 60695-11-10
Thickness tested	**3.0 / ***	mm	-

Powder properties	**Value**	**Unit**	**Test Standard**
Bulk density, powder	**520**	g/l	EN ISO 60
Particle size, D(50)	**55**	µm	ISO 13320, DIN ISO 8130-13

Sustainability	**Value**	**Unit**	**Test Standard**
LCA name of certificate	INFINAM® PA 6004-P		ISO 14040, 14044
LCA certifier	TÜV Rheinland	-	ISO 14040, 14044
Blue water consumption	**22.3**	kg	ISO 14040, 14044
Global Warming Potential incl. bio. C incl. LUC	**4.9**	kg CO_2 eq./kg	ISO 14040, 14044
Global Warming Potential excl. bio. C incl. LUC	**4.9**	kg CO_2 eq./kg	ISO 14040, 14044
Land use (ReCiPe 2016)	**0.1**	Annual crop eq. y	ISO 14040, 14044
GWP savings as compared to 2023 reference	**-3.1**	kg CO_2 eq./kg	ISO 14040, 14044

Characteristics

Key Features, Industrial Sector
Sustainable, Industry and Engineering, 3D Printing

Key Features, Additives
Flame retardant

Key Features, Sustainability
RFP (reducted foot print)

Key Features, Processing
3D Printing

Key Features, Delivery form
Powder

Processing
Additive manufacturing, Powder bed fusion

Special Characteristics
Halogen-free, Semi-crystalline

Additives
Flame retardant

Evonik Operations GmbH
Smart Materials
High Performance Polymers
45772 Marl / Germany
Tel: +49 2365 49-9878
evonik-hp@evonik.com

www.plastics-database.com